

MINOR IN PHYSICS



SACRAMENTO STATE

In Workflow

1. PHYS Committee Chair (mikkel.jensen@csus.edu)
2. PHYS Chair (physicschair@csus.edu)
3. NSM College Committee Chair (mikkel.jensen@csus.edu)
4. NSM Dean (datwyler@csus.edu)
5. Academic Services (catalog@csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Faculty Senate Executive Committee Chair (kathy.honeychurch@csus.edu)
8. Faculty Senate Chair (kathy.honeychurch@csus.edu)
9. Dean of Undergraduate and Graduate (s.storms@csus.edu)
10. President (khtudor@csus.edu)
11. Catalog Editor (catalog@csus.edu)
12. Registrar's Office (k.mcfarland@csus.edu)

Approval Path

1. 2026-01-30T21:37:41Z
Mikkel Jensen (mikkel.jensen): Approved for PHYS Committee Chair
2. 2026-02-03T16:34:24Z
Michael Ray (ray): Approved for PHYS Chair
3. 2026-02-04T23:36:22Z
Mikkel Jensen (mikkel.jensen): Rollback to PHYS Committee Chair for NSM College Committee Chair
4. 2026-03-20T20:28:24Z
Mikkel Jensen (mikkel.jensen): Approved for PHYS Committee Chair
5. 2026-03-20T21:18:35Z
Michael Ray (ray): Approved for PHYS Chair
6. 2026-04-01T22:18:01Z
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
7. 2026-04-02T16:00:06Z
Chris Taylor (ctaylor): Approved for NSM Dean

History

1. May 3, 2018 by clmig-jwehrheim

Date Submitted: 2026-01-27T20:39:20Z

Viewing: Minor in Physics

Last approved: Thu, 03 May 2018 17:33:48 GMT

Last edit: 2026-08-28T20:44:07Z

Changes proposed by: Mikkel Jensen (218650862)

Academic Group: (College)

Natural Sciences & Mathematics

Academic Organization: (Department)

Physics and Astronomy

Catalog Year Effective:

2027-2028 Catalog

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
Mikkel Herholdt Jensen	mikkel.jensen@csus.edu	916-278-7687

Program Snapshot**Type of Program:**

Minor

Program Change Type:

Substantive

Title of the Program:

Minor in Physics

Designation: (degree terminology)

Minor

Delivery Mode:

Fully Face to Face

Please see the CSU/CIP Code Crosswalk: https://www.calstate.edu/csu-system/administration/academic-affairs/academic-programs-innovation-and-faculty-development/Documents/CSU_Codes_to_CIP_2020.pdf

Provide a clear, concise overview of the program proposal (new or change) and provide a justification. For NEW programs describe the purpose and focus of the program, identify the target student population(s), and highlight key strengths and distinguishing features of the program.

This program change is an update to a long-existing minor to list the learning outcomes of the minor which had been missing previously from the Form B. The program change also updates the electives listed for the major, including adding newly developed courses to the elective list (PHYS 152 and 172) and removing courses which would cause units to exceed the required elective unit load (PHYS 151).

University Learning Goals**Undergraduate Learning Goals:**

Competence in the disciplines
Intellectual and practical skills

Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

Curriculum Alignment and Assessment**Program Learning Outcomes**

Provide measurable, program-specific learning outcomes that reflect the most important competencies students will demonstrate upon completion of the program. Programs are expected to assess and use PLOs for continuous improvement.

Program Learning Outcomes

Learning Outcome
Apply scientific reasoning to analyze and solve problems in physics.
Design, conduct, and interpret the outcomes of physical experiments or numerical simulations.

Learning Outcomes Display

Course Code	PLO 1	PLO 2
PHYS 11A		
PHYS 11B		
PHYS 11C		

PHYS 106		
PHYS 105		
PHYS 110		
PHYS 115		
PHYS 124		
PHYS 130		
PHYS 135		
PHYS 136		
PHYS 142		
PHYS 145		
PHYS 150		
PHYS 152		
PHYS 162		
PHYS 172		
PHYS 175		

Please attach a Comprehensive Program Assessment Plan

Minor in Physics AssessmentPlan.docx

Please attach a Curriculum Map Matrix

Minor in Physics CurriculumMapMatrix.docx

Please attach a Five-Year Budget Projection. For NEW programs, also attach a Budget Narrative.

BudgetStatement.docx

Catalog Description (catalog copy):

Units required for Minor: 21, all of which must be taken in Physics, and a minimum of 9 upper division units is required¹

¹ Written approval from a Physics faculty advisor is required.

Program Description

Physics is the most fundamental science and underlies our understanding of nearly all areas of science and technology. In a broad sense, physics is concerned with the study of energy, space, and matter, and with the interactions between matter and the laws that govern these interactions. More specifically, physicists study mechanics, heat, light, electric and magnetic fields, gravitation, relativity, atomic and nuclear physics, and condensed matter physics.

Admission and Continuation Requirements (catalog copy): minimum GPA and prerequisites (if applicable), required coursework or preparation, portfolio, test scores, and/or letters of recommendation. For graduate programs: expectations for a relevant bachelor's degree (required or preferred disciplines, prerequisite knowledge, or equivalent experience), include evidence that program requirements conform to the minimum requirements for the culminating experience, as specified in Title 5 Section 40510 The Master's Degree and Section 40511 The Doctoral Degree.

Program Requirements (catalog copy):

Program Requirements

Code	Title	Units
Required Lower Division Courses (12 Units)		
PHYS 11A	General Physics: Mechanics	4
PHYS 11B	General Physics: Heat, Light, Sound, Modern Physics	4
PHYS 11C	General Physics: Electricity and Magnetism	4
Required Upper Division Courses (3 Units)		
PHYS 106	Introduction to Modern Physics	3

Additional Upper Division Requirements (6 Units)

Select 6 units of electives in consultation with an advisor:	6
--	---

PHYS 105	Mathematical Methods in Physics
PHYS 110	Classical Mechanics
PHYS 115	Electronics and Instrumentation
PHYS 124	Thermodynamics and Statistical Mechanics
PHYS 130	Acoustics
PHYS 135	Electricity And Magnetism
PHYS 136	Electrodynamics of Waves, Radiation, and Materials
PHYS 142	Applied Solid State Physics
PHYS 145	Optics
PHYS 150	Quantum Mechanics
PHYS 152	Nuclear and Particle Physics
PHYS 162	Scientific Computing: Basic Methods
PHYS 172	Biological Physics
PHYS 175	Advanced Physics Laboratory

Total Units	21
--------------------	-----------

Note: PHYS 5A, PHYS 5B may be substituted for PHYS 11A, PHYS 11C, but the 21-unit minimum must be met by additional courses in one of two ways:

- PHYS 106 plus three other upper division Physics courses **OR**
- PHYS 106 plus PHYS 11B plus two other upper division Physics courses.

Fiscal Impact to Change an Existing Program

Indicate programmatic or fiscal impact which this change will have on other academic units' programs, and describe the consultation that has occurred with affected units:

n/a

Provide a fiscal analysis of the proposed changes:

This program change proposal will not incur any additional expenses. It does not require the offering of more sections than what is currently offered, and will therefore not incur any extra direct expenses in staff/faculty teaching. The program change also has no other extra expenses (IT support, extra faculty trainings, facility fees, equipment, or library services). No extra administrative staff or program coordinator expenses are tied to this program change.

How will the above changes be accommodated within the department/College existing fiscal resources?

The proposed changes will not require any resources beyond what is already allocated to the program.

Will the proposed changes require additional resources?

No

What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed?

n/a

Estimate the cost and indicate how these resource needs will be accommodated:

n/a

Reviewer Comments:

Mikkel Jensen (mikkel.jensen) (Wed, 04 Feb 2026 23:36:22 GMT): Rollback: Please reword LOs to be more distinct from one another, and clarify what the address (experiments, theory classes, etc.).

Key: 223